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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/383,331	08/26/1999	AMMAR DERRAA	100.718.422	6442

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RAJESH VALLABH
HALE AND DORR LLP
60 STATE STREET
BOSTON, MA 02109

EXAMINER

SANTIAGO, MARICELI

ART UNIT PAPER NUMBER

2879

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/383,331

Applicant(s)

DERRAA, AMMAR

Examiner

Mariceli Santiago

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 25-31 is/are pending in the application.
- 4a) Of the above claim(s) 10-16 and 25 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9 and 26-31 is/are allowed.
- 6) ☒ Claim(s) 17-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

The Amendment, filed on November 23, 2004, has been entered and acknowledged by the Examiner.

Cancellation of claim 24 has been entered.

Claims 1-23 and 25-31 are pending in the instant application.

Claims 10-16 and 25 have been withdrawn from consideration as directed to a non-elected invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobori et al. (US 5,162,704).

Regarding claim 17, Kobori discloses a method of making a field emission device, a method of making a column line structure for an addressing matrix, comprising forming a conductive structure (2), forming a resistive layer (5) on the conductive structure. wherein the resistive layer is in contact with at least one micropoint emitter (6) formed on a substrate, and forming an insulative layer (7) partly covering the resistive layer (5) and in contact with the at least one micropoint emitter (6).

Regarding claim 18, Kobori discloses a method wherein the conductive structure comprises metal (Column 2, lines 50-53).

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Regarding claim 19, Kobori discloses a method wherein the conductive structure comprises aluminum (Column 2, lines 50-53).

Regarding claim 20, Kobori discloses a method wherein the resistive layer comprises silicon (Column 2, lines 55-56).

Regarding claim 21, Kobori discloses a method wherein the insulative layer comprises silicon oxide (Column 2, lines 62-64).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobori et al. (US 5,162,704) in view of in view of Huang (US 5,578,896).

Regarding claim 22, Kobori discloses a method as claimed, however, is silent in regards to the limitation of the insulative layer comprising silicon nitride. In the same field of endeavor, Huang discloses a method of manufacturing a cathode assembly for an FED, and further the equivalence and suitability of either silicon oxide or silicon nitride are standard materials for the insulative layer of a field emission display (Column 3, lines 9-20). It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Thus, it would have been obvious to one having ordinary skills in the art at the time the invention was made to have incorporate silicon nitride as an insulative layer in the method of Kobori, since the selection of known materials for a known purpose is within the skill of the art as evidenced by Huang's teaching.

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Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobori et al. (US 5,162,704).

Kobori discloses the claimed invention except for the limitation of the insulative layer comprises a strip having a thickness of about 1000 Å. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the insulative layer having a thickness of about 1000 Å, since optimization of workable ranges is considered within the skill of the art.

Allowable Subject Matter

Claims 1-9 and 26-31 are allowed over the prior art of record.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 1 and 26, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claims 1 and 26, and specifically comprising the limitation of forming a resistive layer over the emitter electrode structure, forming an insulative layer on a portion of the resistive layer, forming at least one micropoint emitter on the substrate and in contact with both the resistive layer and the insulative layer, forming a conductive grid structure spaced from the at least one micropoint, and forming a dielectric structure spaced from the at least one micropoint and between the insulative layer and the grid structure.

Regarding claims 2-9, claims 2-9 are allowable for the reasons given in claim 1 because of their dependency status from claim 1.

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Regarding claims 27-31, claims 27-31 are allowable for the reasons given in claim 26 because of their dependency status from claim 26.

Response to Arguments

Applicant's arguments with respect to claims 17-23 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariceli Santiago whose telephone number is (571) 272-2464. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Mariceli Santiago
Patent Examiner
Art Unit 2879